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| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
|--|-------------|----------------------|---------------------|------------------|
| 09/849,975 | 05/08/2001 | Hajime Kimura | 12732-044001 | 1362 |
| 26171 | 7590 | 07/19/2004 | EXAMINER | |
| FISH & RICHARDSON P.C. 1425 K STREET, N.W. 11TH FLOOR WASHINGTON, DC 20005-3500 | | | LUU, THANH X | |
| | | | ART UNIT | PAPER NUMBER |
| | | | 2878 | |

DATE MAILED: 07/19/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/849,975

Applicant(s)

KIMURA, HAJIME

Examiner

Thanh X Luu

Art Unit

2878

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 01 March 2004.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1,4 and 25-38 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1,4 and 25-38 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) Paper No(s). _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Continued Examination Under 37 CFR 1.114

1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on March 1, 2004 has been entered.

Claims 1, 4 and 25-38 are currently pending.

Claim Rejections - 35 USC § 103

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. Claims 1-6, 26, 30 and 33-36 are rejected under 35 U.S.C. 103(a) as being unpatentable over Fujieda et al. (U.S. Patent 5,877,492) in view of Nakamura et al. (U.S. Patent 5,835,142).

Regarding claims 1-6 and 33-36, Fujieda et al. disclose (see Figure 6) a close contact type sensor arranged with a plurality of unit pixels (groups of 4) each comprising a sensor circuit portion (4) and a plurality of irradiation window portions (5). Fujieda et al. further disclose (see Figure 6) an optical fiber plate (at 9) comprising an optical fiber (9) between the sensor circuit portion and a reading object (10); wherein an area of any

Art Unit: 2878

of the plurality of irradiation window portions (5) is larger than an area of half of a section of a single piece of an optical fiber (9) in the optical fiber plate. Fujieda et al. further disclose (see column 1, lines 10-12) the sensor in a scanner or a portable information terminal (facsimile or hand scanner). Fujieda does not specifically disclose a core, a clad or an absorbing layer of the fiber. Nakamura et al. teach (see Figures 4 and 5) a contact image sensor having a fiber plate (15) comprising a fiber with a core (15b), a clad (15c) over the core, and an absorbing layer (15d) over the clad. Nakamura et al. also teach (see claim 10) light directly incident on a section (the absorbing layer and the clad) of the optical fiber is propagated in the core. Nakamura et al. further recognize that a fiber having such a core, clad and absorbing layer provides for increased light transfer. It would have been obvious to a person of ordinary skill in the art at the time the invention was made to provide a fiber with a core, clad and absorbing layer in the apparatus of Fujieda et al. to increase light coupling and improve imaging.

Regarding claims 26 and 30, Fujieda et al. disclose the claimed invention as set forth above, wherein the sensor comprises a photoelectric conversion element. Fujieda et al. do not specifically disclose the sensor comprises a photo diode. Nakamura et al. teach (see column 3, lines 44-46) providing a photo diode as the photoelectric conversion element in a close contact sensor. Thus, Nakamura et al. recognize that photo diodes or other photoelectric conversion elements are easily formed into close contact sensors. It would have been obvious to a person of ordinary skill in the art at the time the invention was made to provide a photo diode in the apparatus of Fujieda et

Art Unit: 2878

al. in view of Nakamura et al. to provide a more easily manufactured or less costly contact sensor.

4. Claims 27, 28, 31 and 32 are rejected under 35 U.S.C. 103(a) as being unpatentable over Fujieda et al. in view of Nakamura et al. and further in view of Applicant's Admitted Prior Art (Figure 5), hereinafter, AAPA.

Regarding claims 27, 28, 31 and 32, Fujieda et al. in view of Nakamura et al. disclose the claimed invention as set forth above. Fujieda et al. and Nakamura et al. do not specifically disclose an amplifying transistor or a resetting transistor. AAPA teach (see Figure 5) close contact sensors having support circuitry comprising amplifying and resetting transistors. Thus, AAPA recognize that amplifying and resetting transistors are common in such sensors. It would have been obvious to a person of ordinary skill in the art at the time the invention was made to include amplifying and resetting transistors in the apparatus of Fujieda et al. in view of Nakamura et al. and further in view of AAPA to improve detection by amplifying signals and resetting the signals after readout.

5. Claims 25 and 29 are rejected under 35 U.S.C. 103(a) as being unpatentable over Fujieda et al. in view of Nakamura et al. and further in view of Ratnakar et al. (U.S. Patent 6,421,468).

Regarding claims 25 and 29, Fujieda et al. in view of Nakamura et al. disclose the claimed invention as set forth above. Fujieda et al. and Nakamura et al. do not specifically disclose the sensor incorporated into the group of consisting of a digital still or x-ray camera as claimed. Ratnakar et al. teach (see column 4, line 60 - column 5,

Art Unit: 2878

line 10) an input device such as a camera or an x-ray camera having a close contact sensor (CIS). Thus, Ratnakar et al. recognize that such devices use a close contact sensor as detectors. It would have been obvious to a person of ordinary skill in the art at the time the invention was made to incorporate the sensor of Fujieda et al. in view of Nakamura et al. and further in view of Ratnakar et al. in digital cameras or x-ray cameras to improve detection in such devices.

Response to Arguments

6. Applicant's arguments filed March 1, 2004 have been fully considered but they are not persuasive.

Applicant asserts that the prior art of record does not disclose or teach light directly incident on a section of the optical fiber is propagated in the core. Examiner disagrees. Since the absorbing layer and the clad is a section of the optical fiber, Nakamura et al. does indeed teach the claimed language.

Thus, as set forth above, this rejection is proper.

Conclusion

7. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Thanh X Luu whose telephone number is (571) 272-2441. The examiner can normally be reached on M-F (6:30-4:00) First Friday off.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, David Porta can be reached on (571) 272-2444. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

A handwritten signature in black ink, appearing to read 'Thanh X Luu', with a stylized flourish at the end.

Thanh X Luu
Primary Examiner
Art Unit 2878

06/04